

ABSTRACT

The invention relates to bacterial choline binding proteins (CBPs) which bind
5 choline. Such proteins are particularly desirable for vaccines against appropriate
strains of Gram positive bacteria, particularly streptococcus, and more particularly
pneumococcus. Also provided are DNA sequences encoding the bacterial choline
binding proteins or fragment thereof, antibodies to the bacterial choline binding
10 proteins, pharmaceutical compositions comprising the bacterial choline binding
proteins, antibodies to the bacterial choline binding proteins suitable for use in
passive immunization, and small molecule inhibitors of choline binding protein
mediated adhesion. Methods for diagnosing the presence of the bacterial choline
binding protein, or of the bacteria, are also provided. In a specific embodiment, a
15 streptococcal choline binding protein is an enolase, which demonstrates strong
affinity for fibronectin.